

NONREIMBURSABLE SPACE ACT AGREEMENT  
BETWEEN  
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
GLENN RESEARCH CENTER  
AND UNIVERSITY OF NOTRE DAME  
FOR RESEARCH FOR FAN NOISE GENERATION AND PROPAGATION ON THE  
ADVANCED NOISE CONTROL FAN (ANCF) TEST RIG.

ARTICLE 1. AUTHORITY AND PARTIES

In accordance with the National Aeronautics and Space Act (51 U.S.C. § 20113(e)), this Agreement is entered into by the National Aeronautics and Space Administration Glenn Research Center, located at 21000 Brookpark Road, Cleveland, OH 44135 (hereinafter referred to as "NASA" or "NASA GRC") and University of Notre Dame located at 940 Grace Hall, Notre Dame, IN 46556-5708 (hereinafter referred to as "Partner" or "UND"). NASA and Partner may be individually referred to as a "Party" and collectively referred to as the "Parties."

ARTICLE 2. PURPOSE

NASA and UND wish to partner and collaborate in order to jointly improve the Science, Technology, Engineering and Mathematics (STEM) education in the United States. NASA wishes to maintain the access to Low Technology Readiness Level (TRL) fan noise research in order to impact the NASA Strategic Aeronautics Research Plan. These goals will be accomplished by performing joint experimental research in the area of fan noise generation and propagation on the Advanced Noise Control Fan (ANCF) test article, owned by NASA, currently at the UND location.

ARTICLE 3. RESPONSIBILITIES

A. NASA GRC will use reasonable efforts to:

1. Provide the ANCF test article. The ANCF includes the following subcomponents:
  - a. Electronics for operation and control of the ANCF.
  - b. Electronics for operation and control integrated rotating rake.
  - c. Instrumentation for far-field data acquisition.
  - d. 64-channel data acquisition unit(s).
  - e. Farfield and rotating rake data processing routines.
2. Provide Partner with existing documentation, to the extent it is available, for the items identified in the above in NASA's responsibility no. 1.
3. Provide subject matter expertise for mechanical/electrical maintenance review and inspection of ANCF at UND's location of limited duration of no more than one (1) week annually, if needed and/or via Microsoft (MS) Teams or similar remote communication.

4. Transfer operational and research knowledge in an educational setting, by video, or at UND's location of limited duration of no more than 1 week annually, if needed and/or via MS Teams or similar remote communication.

5. Consult with UND for ongoing educational and research opportunities on an annual basis.

6. Develop written Research/STEM plan annually with UND.

B. Partner will use reasonable efforts to:

1. Provide personnel to operate the ANCF.

2. Provide personnel to maintain the ANCF and maintain maintenance records.

3. Provide copy of maintenance records, logs, and summary report of maintenance to NASA at a minimum of annually, corresponding with development of yearly research plans, and/or upon request.

4. Provide on-site access, and/or access via MS Teams or similar remote communication to support NASA personnel in conducting NASA's responsibilities items 3 and 4.

5. Determine an annual proposed educational and research effort and consult with NASA on an annual basis.

6. Provide outcome of educational and research effort to NASA on an annual basis.

7. Consult with NASA for ongoing educational and research opportunities on an annual basis.

8. Develop written Research/STEM plan annually with NASA.

#### ARTICLE 4. SCHEDULE AND MILESTONES

The planned major milestones and estimated schedule for the activities defined in the "Responsibilities" Article are identified below. The current circumstances related to the COVID-19 pandemic may significantly impact the schedule and milestones of this Agreement and dates are therefore subject to a considerable degree of variability. The Parties may utilize a separate document labeled as "Appendix A: Schedule Coordination Matrix" ("Appendix A") to coordinate possible changes to the Agreement schedule. The Appendix is utilized only for Agreement performance planning purposes and the terms and conditions of this Agreement control. Any change to schedule identified in the Appendix must be signed or approved by the applicable Management Points of Contact or Technical Points of Contact for the respective Parties, as appropriate. The dates included in the aforementioned Appendix are the best approximation at the time this Agreement was created and may be amended.

01. NASA/UND jointly develop Research/STEM plans for SEE APPENDIX A. FY 2022.
02. NASA/UND jointly develop Research/STEM plans for SEE APPENDIX A. FY 2023.
03. NASA/UND jointly develop Research/STEM plans for SEE APPENDIX A. FY 2024.
04. NASA/UND jointly develop Research/STEM plans for SEE APPENDIX A. FY 2025.
05. NASA/UND jointly develop Research/STEM plans for SEE APPENDIX A. FY 2026.
06. Determination of final status of ANCF Test Rig by NASA. SEE APPENDIX A.

#### ARTICLE 5. FINANCIAL OBLIGATIONS

There will be no transfer of funds between the Parties under this Agreement and each Party will fund its own participation. All activities under or pursuant to this Agreement are subject to the availability of funds, and no provision of this Agreement shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, (31 U.S.C. § 1341).

#### ARTICLE 6. PRIORITY OF USE

Any schedule or milestone in this Agreement is estimated based upon the Parties' current understanding of the projected availability of NASA goods, services, facilities, or equipment. In the event that NASA's projected availability changes, Partner shall be given reasonable notice of that change, so that the schedule and milestones may be adjusted accordingly. The Parties agree that NASA's use of the goods, services, facilities, or equipment shall have priority over the use planned in this Agreement. Should a conflict arise, NASA in its sole discretion shall determine whether to exercise that priority. Likewise, should a conflict arise as between two or more non-NASA Partners, NASA, in its sole discretion, shall determine the priority as between those Partners. This Agreement does not obligate NASA to seek alternative government property or services under the jurisdiction of NASA at other locations.

#### ARTICLE 7. NONEXCLUSIVITY

This Agreement is not exclusive; accordingly, NASA may enter into similar agreements for the same or similar purpose with other private or public entities.

#### ARTICLE 8. LIABILITY AND RISK OF LOSS

A. Each Party hereby waives any claim against the other Party, employees of the other Party, the other Party's Related Entities (including but not limited to contractors and subcontractors at any tier, grantees, investigators, customers, users, and their contractors or subcontractor at any tier), or employees of the other Party's Related Entities for any injury to, or death of, the waiving Party's employees or the employees of its Related Entities, or for damage to, or loss of, the waiving Party's property or the property of its Related Entities arising from or related to activities conducted under this Agreement, whether such injury, death, damage, or loss arises through negligence or otherwise, except in the case of willful misconduct.

B. Each Party further agrees to extend this cross-waiver to its Related Entities by requiring them, by contract or otherwise, to waive all claims against the other Party, Related Entities of the other Party, and employees of the other Party or of its Related Entities for injury, death, damage, or loss arising from or related to activities conducted under this Agreement. Additionally, each Party shall require that their Related Entities extend this cross-waiver to their Related Entities by requiring them, by contract or otherwise, to waive all claims against the other Party, Related Entities of the other Party, and employees of the other Party or of its Related Entities for injury, death, damage, or loss arising from or related to activities conducted under this Agreement.

ARTICLE 9. LIABILITY AND RISK OF LOSS - COMMERCIAL GENERAL LIABILITY INSURANCE

A. Insurance Coverage and Amounts.

Partner shall, at all times during the term of this Agreement and at Partner's sole cost and expense, obtain and keep in force the insurance coverage and amounts set forth in this section 1. Partner shall maintain commercial general liability insurance, including contractual liability, broad form property damage liability, fire, legal liability, products and completed operations, and medical payments, with limits not less than \$1,000,000 per occurrence and aggregate, insuring against claims for bodily injury, personal injury and property damage arising from activities under this Agreement. The policy shall contain an exception to any pollution exclusion that insures damage or injury arising out of heat, smoke or fumes from a hostile fire. Any general aggregate shall apply on a per location basis. If Partner uses owned, hired or non-owned vehicles, Partner shall maintain business auto liability insurance with limits not less than \$1,000,000 per accident covering such vehicles. Partner shall carry workers' compensation insurance for all of its employees in statutory limits as required by state law and employer's liability insurance that affords not less than \$500,000 for each coverage. Any deductibles selected by Partner for any insurance policy described in this section 1 shall be the sole responsibility of Partner.

B. Insurance Requirements.

1. All insurance and all renewals thereof shall be issued by companies with a rating of at least "A-" "VIII" (or its equivalent successor) or better in the current edition of Best's

Insurance Reports (or its equivalent successor, or, if there is no equivalent successor rating, otherwise acceptable to NASA) and be licensed to do and doing business in Ohio.

2. Each policy shall be endorsed to provide that the policy shall not be canceled or materially altered without thirty (30) days prior written notice to NASA and shall remain in effect notwithstanding any such cancellation or alteration until such notice shall have been given to NASA and such period of thirty (30) days shall have expired.

3. The commercial general liability and any automobile liability insurance shall be endorsed to name NASA (and any other parties designated by NASA) as an additional insured, shall be primary and noncontributing with any insurance which may be carried by NASA, and shall afford coverage for all claims based on any act, omission, event or condition that occurred or arose (or the onset of which occurred or arose) during the policy period.

4. Partner shall deliver certificates of insurance and endorsements, acceptable to NASA, to NASA before the commencement of activities under this Agreement and at least ten business (10) days before expiration of each policy. Such documents shall be delivered to the address for certificate holder set forth below. If Partner fails to insure or fails to furnish any such insurance certificate, endorsement or policy, NASA shall have the right from time to time to effect such insurance for the benefit of Partner or NASA or both of them, and Partner shall pay to NASA on written demand, as additional reimbursement under this Agreement, all premiums paid by NASA. Each certificate of insurance shall list the certificate holder as follows:

National Aeronautics and Space Administration  
Glenn Research Center  
Attn: Office of the General Counsel  
Mail Stop 142-7  
21000 Brookpark Road  
Cleveland, OH 44135

5. If NASA at any time believes that the limits or extent of coverage or deductibles with respect to any of the insurance required in this Agreement are insufficient, NASA may determine the proper and reasonable limits and extent of coverage and deductibles for such insurance and such insurance shall thereafter be carried with the limits and extent of coverage and deductibles as so determined until further change pursuant to the provisions of this Agreement.

6. No approval by NASA of any insurer, or the terms or conditions of any policy, or any coverage or amount of insurance, or any deductible amount shall be construed as a representation by NASA of the solvency of the insurer or the sufficiency of any policy or any coverage or amount of insurance or deductible. By requiring insurance, NASA makes no representation or warranty that coverage or limits will necessarily be adequate to protect Partner, and such coverage and limits shall not be deemed as a limitation on Partner's liability under any indemnities granted to NASA in this Agreement.

7. Failure of NASA to demand such certificate or other evidence of full compliance with these insurance requirements or failure of NASA to identify a deficiency from evidence that is provided shall not be construed as a waiver of Partner's obligation to maintain such insurance.

#### ARTICLE 10. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

##### A. General

1. "Related Entity" as used in this Data Rights Article means a contractor, subcontractor, grantee, or other entity having a legal relationship with NASA or Partner, that is assigned, tasked, or contracted to perform activities under this Agreement.
2. "Data," means recorded information, regardless of form, the media on which it is recorded, or the method of recording.
3. "Proprietary Data," means Data embodying trade secrets developed at private expense or commercial or financial information that is privileged or confidential, and that includes a restrictive notice, unless the Data is:
  - a. known or available from other sources without restriction;
  - b. known, possessed, or developed independently, and without reference to the Proprietary Data;
  - c. made available by the owners to others without restriction; or
  - d. required by law or court order to be disclosed.
4. Data exchanged under this Agreement is exchanged without restriction except as otherwise provided herein.
5. Notwithstanding any restrictions provided in this Article, the Parties are not restricted in the use, disclosure, or reproduction of Data provided under this Agreement that meets one of the exceptions in 3. above. If a Party believes that any exceptions apply, it shall notify the other Party before any unrestricted use, disclosure, or reproduction of the Data.
6. The Parties will not exchange preexisting Proprietary Data under this Agreement unless authorized herein or in writing by the owner.
7. If the Parties exchange Data having a notice that the Receiving Party deems is ambiguous or unauthorized, the Receiving Party shall tell the Providing Party. If the notice indicates a restriction, the Receiving Party shall protect the Data under this Article unless otherwise directed in writing by the Providing Party.
8. The Data rights herein apply to the employees and Related Entities of Partner. Partner shall ensure that its employees and Related Entity employees know about and are bound by the obligations under this Article.

9. Disclaimer of Liability: NASA is not restricted in, or liable for, the use, disclosure, or reproduction of Data without a restrictive notice or for Data Partner gives, or is required to give, the U.S. Government without restriction.

B. Data First Produced by Partner Under this Agreement

If Data first produced by Partner or its Related Entities under this Agreement is given to NASA, and the Data is Proprietary Data, and it includes a restrictive notice, NASA will use reasonable efforts to protect it. The Data will be disclosed and used (under suitable protective conditions) only for U.S. Government purposes.

C. Data First Produced by NASA Under this Agreement

If Partner requests that Data first produced by NASA under this Agreement be protected, and NASA determines it would be Proprietary Data if obtained from Partner, NASA will use reasonable efforts to mark it with a restrictive notice and protect it for one year after its development. During this restricted period the Data may be disclosed and used (under suitable protective conditions) for U.S. Government purposes only, and thereafter for any purpose. Partner must not disclose the Data without NASA's written approval during the restricted period. The restrictions placed on NASA do not apply to Data disclosing a NASA-owned invention for which patent protection is being considered.

D. Publication of Results

The National Aeronautics and Space Act (51 U.S.C. § 20112) requires NASA to provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof. As such, NASA may publish unclassified and non-Proprietary Data resulting from work performed under this Agreement. The Parties will coordinate publication of results allowing a reasonable time to review and comment.

E. Data Disclosing an Invention

If the Parties exchange Data disclosing an invention for which patent protection is being considered, and the furnishing Party identifies the Data as such when providing it to the Receiving Party, the Receiving Party shall withhold it from public disclosure for one (1) year.

F. Copyright

Data exchanged with a copyright notice and with no restrictive notice is presumed to be published. The following royalty-free licenses apply:

1. If indicated on the Data that it was produced outside of this Agreement, it may be reproduced, distributed, and used to prepare derivative works only for carrying out the Receiving Party's responsibilities under this Agreement.

2. Data without the indication of F.1. is presumed to be first produced under this Agreement. Except as otherwise provided in paragraph E. of this Article, and in the Inventions and Patent Rights Article of this Agreement for protection of reported inventions, the Data may be reproduced, distributed, and used to prepare derivative works for any purpose.

#### G. Data Subject to Export Control

Whether or not marked, technical data subject to the export laws and regulations of the United States provided to Partner under this Agreement must not be given to foreign persons or transmitted outside the United States without proper U.S. Government authorization.

### ARTICLE 11. INTELLECTUAL PROPERTY RIGHTS - INVENTION AND PATENT RIGHTS

A. "Related Entity" as used in this Invention and Patent Rights Article means a contractor, subcontractor, grantee, or other entity having a legal relationship with NASA or Partner assigned, tasked, or contracted with to perform activities under this Agreement.

B. The invention and patent rights herein apply to employees and Related Entities of Partner. Partner shall ensure that its employees and Related Entity employees know about and are bound by the obligations under this Article.

C. NASA has determined that 51 U.S.C. § 20135(b) does not apply to this Agreement. Therefore, title to inventions made (conceived or first actually reduced to practice) under this Agreement remain with the respective inventing party(ies). No invention or patent rights are exchanged or granted under this Agreement. NASA and Partner will use reasonable efforts to report inventions made jointly by their employees (including employees of their Related Entities). The Parties will consult and agree on the responsibilities and actions to establish and maintain patent protection for joint invention, and on the terms and conditions of any license or other rights exchanged or granted between them.

### ARTICLE 12. USE OF NASA NAME AND NASA EMBLEMS

#### A. NASA Name and Initials

Partner shall not use "National Aeronautics and Space Administration" or "NASA" in a way that creates the impression that a product or service has the authorization, support, sponsorship, or endorsement of NASA, which does not, in fact, exist. Except for releases under the "Release of General Information to the Public and Media" Article, Partner must submit any proposed public use of the NASA name or initials (including press releases and all promotional and advertising use) to the NASA Associate Administrator for the Office of Communications or designee ("NASA Communications") for review and

approval. Approval by NASA Office of Communications shall be based on applicable law and policy governing the use of the NASA name and initials.

#### B. NASA Emblems

Use of NASA emblems (i.e., NASA Seal, NASA Insignia, NASA logotype, NASA Program Identifiers, and the NASA Flag) is governed by 14 C.F.R. Part 1221. Partner must submit any proposed use of the emblems to NASA Communications for review and approval.

#### ARTICLE 13. RELEASE OF GENERAL INFORMATION TO THE PUBLIC AND MEDIA

NASA or Partner may, consistent with Federal law and this Agreement, release general information regarding its own participation in this Agreement as desired.

Pursuant to Section 841(d) of the NASA Transition Authorization Act of 2017, Public Law 115-10 (the "NTAA"), NASA is obligated to publicly disclose copies of all agreements conducted pursuant to NASA's 51 U.S.C. §20113(e) authority in a searchable format on the NASA website within 60 days after the agreement is signed by the Parties. The Parties acknowledge that a copy of this Agreement will be disclosed, without redactions, in accordance with the NTAA.

#### ARTICLE 14. DISCLAIMER OF WARRANTY

Goods, services, facilities, or equipment provided by NASA under this Agreement are provided "as is." NASA makes no express or implied warranty as to the condition of any such goods, services, facilities, or equipment, or as to the condition of any research or information generated under this Agreement, or as to any products made or developed under or as a result of this Agreement including as a result of the use of information generated hereunder, or as to the merchantability or fitness for a particular purpose of such research, information, or resulting product, or that the goods, services, facilities or equipment provided will accomplish the intended results or are safe for any purpose including the intended purpose, or that any of the above will not interfere with privately-owned rights of others. Neither the government nor its contractors shall be liable for special, consequential or incidental damages attributed to such equipment, facilities, technical information, or services provided under this Agreement or such research, information, or resulting products made or developed under or as a result of this Agreement.

#### ARTICLE 15. DISCLAIMER OF ENDORSEMENT

NASA does not endorse or sponsor any commercial product, service, or activity. NASA's participation in this Agreement or provision of goods, services, facilities or equipment under this Agreement does not constitute endorsement by NASA. Partner agrees that nothing in this Agreement will be construed to imply that NASA authorizes,

supports, endorses, or sponsors any product or service of Partner resulting from activities conducted under this Agreement, regardless of the fact that such product or service may employ NASA-developed technology.

#### ARTICLE 16. COMPLIANCE WITH LAWS AND REGULATIONS

A. The Parties shall comply with all applicable laws and regulations including, but not limited to, safety; security; export control; environmental; and suspension and debarment laws and regulations. Access by a Partner to NASA facilities or property, or to a NASA Information Technology (IT) system or application, is contingent upon compliance with NASA security and safety policies and guidelines including, but not limited to, standards on badging, credentials, and facility and IT system/application access.

B. With respect to any export control requirements:

1. The Parties will comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 C.F.R. Parts 120 through 130, and the Export Administration Regulations (EAR), 15 C.F.R. Parts 730 through 799, in performing work under this Agreement or any Annex to this Agreement. In the absence of available license exemptions or exceptions, the Partner shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data and software, or for the provision of technical assistance.

2. The Partner shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of work under this Agreement or any Annex under this Agreement, including instances where the work is to be performed on-site at NASA and where the foreign person will have access to export-controlled technical data or software.

3. The Partner will be responsible for all regulatory record-keeping requirements associated with the use of licenses and license exemptions or exceptions.

4. The Partner will be responsible for ensuring that the provisions of this Article apply to its Related Entities.

C. With respect to suspension and debarment requirements:

1. The Partner hereby certifies, to the best of its knowledge and belief, that it has complied, and shall comply, with 2 C.F.R. Part 180, Subpart C, as supplemented by 2 C.F.R. Part 1880, Subpart C.

2. The Partner shall include language and requirements equivalent to those set forth in subparagraph C.1., above, in any lower-tier covered transaction entered into under this Agreement.

#### ARTICLE 17. TERM OF AGREEMENT

This Agreement becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or five (5) years from the Effective Date, whichever comes first.

ARTICLE 18. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Agreement by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 19. CONTINUING OBLIGATIONS

The rights and obligations of the Parties that, by their nature, would continue beyond the expiration or termination of this Agreement, e.g., "Liability and Risk of Loss" and "Intellectual Property Rights"-related clauses shall survive such expiration or termination of this Agreement.

ARTICLE 20. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Agreement.

Management Points of Contact

NASA

Amy Jankovsky  
Manager, P&P/AATT  
Mail Stop: 162-3  
21000 Brookpark Road  
Cleveland, OH 44135  
Phone: (216) 977-7498  
Fax: (216) 977-2346  
amy.l.jankovsky@nasa.gov

University of Notre Dame

Greg Luttrell  
Director, Research Contracts  
940 Grace Hall  
Notre Dame, IN 46556-5708  
Phone: 514-631-7432  
RCA@nd.edu

Technical Points of Contact

NASA

Daniel L Sutliff, Ph.D.  
Research Engineer  
Mail Suite: MS 54-3  
21000 Brookpark Road  
Cleveland, OH 44135  
Phone: (216) 433-6290  
Fax: (216) 433-3918  
Daniel.L.Sutliff@nasa.gov

University of Notre Dame

Scott C. Morris  
Research Director, Turbomachinery Lab  
1165 Franklin St Suite 200  
South Bend, IN 46601-3321  
Phone: (574) 631-3238  
smorris1@nd.edu

ARTICLE 21. DISPUTE RESOLUTION

Except as otherwise provided in the Article entitled "Priority of Use," the Article entitled "Intellectual Property Rights – Invention and Patent Rights" (for those activities governed by 37 C.F.R. Part 404), and those situations where a pre-existing statutory or regulatory system exists (e.g., under the Freedom of Information Act, 5 U.S.C. § 552), all disputes concerning questions of fact or law arising under this Agreement shall be referred by the claimant in writing to the appropriate person identified in this Agreement as the "Points of Contact." The persons identified as the "Points of Contact" for NASA and the Partner will consult and attempt to resolve all issues arising from the implementation of this Agreement. If they are unable to come to agreement on any issue, the dispute will be referred to the signatories to this Agreement, or their designees, for joint resolution. If the Parties remain unable to resolve the dispute, then the NASA signatory or that person's designee, as applicable, will issue a written decision that will be the final agency decision for the purpose of judicial review. Nothing in this Article limits or prevents either Party from pursuing any other right or remedy available by law upon the issuance of the final agency decision.

ARTICLE 22. INVESTIGATIONS OF MISHAPS AND CLOSE CALLS

In the case of a close call, mishap or mission failure, the Parties agree to provide assistance to each other in the conduct of any investigation. For all NASA mishaps or close calls, Partner agrees to comply with NPR 8621.1, "NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping."

ARTICLE 23. MODIFICATIONS

Any modification to this Agreement shall be executed, in writing, and signed by an authorized representative of NASA and the Partner.

ARTICLE 24. ASSIGNMENT

Neither this Agreement nor any interest arising under it will be assigned by the Partner or NASA without the express written consent of the officials executing, or successors, or higher-level officials possessing original or delegated authority to execute this Agreement.

ARTICLE 25. APPLICABLE LAW

U.S. Federal law governs this Agreement for all purposes, including, but not limited to, determining the validity of the Agreement, the meaning of its provisions, and the rights, obligations and remedies of the Parties.

ARTICLE 26. INDEPENDENT RELATIONSHIP

This Agreement is not intended to constitute, create, give effect to or otherwise recognize a joint venture, partnership, or formal business organization, or agency agreement of any kind, and the rights and obligations of the Parties shall be only those expressly set forth herein.

ARTICLE 27. LOAN OF GOVERNMENT PROPERTY

The Parties shall enter into a NASA Form 893, Loan of NASA Equipment, for NASA equipment loaned to Partner.

ARTICLE 28. SIGNATORY AUTHORITY

The signatories to this Agreement covenant and warrant that they have authority to execute this Agreement. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND  
SPACE ADMINISTRATION  
GLENN RESEARCH CENTER

UNIVERSITY OF NOTRE DAME

BY: \_\_\_\_\_  
Marla E. Pérez-Davis, Ph.D.  
Center Director

BY:  \_\_\_\_\_  
Greg Luttrell  
Director, Research Contracts

DATE: \_\_\_\_\_

DATE: May 24, 2021

**APPENDIX A: SCHEDULING COORDINATION MATRIX**

<b>Associated Agreement (the “Agreement”):</b>	Nonreimbursable Space Act Agreement No. SAA3-1688 Between the National Aeronautics and Space Administration Glenn Research Center and the University of Notre Dame for Research for Fan Noise Generation and Propagation on the Advanced Noise Control Fan (ANCF) Test Rig.
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The following matrix is provided as a means for the Parties to coordinate scheduling changes associated with the applicable Agreement milestones. Any schedule changes identified in this Appendix must be approved by the Management Points of Contact or Technical Points of Contact for the respective Parties, as appropriate. This Appendix and the activities and dates contemplated herein are governed by the terms and conditions of the Agreement. In the event of a conflict or ambiguity between this Appendix and the Agreement, the terms of the Agreement shall control.

<b>Reference to Agreement Milestone</b>	<b>Schedule</b>	<b>NASA Initials &amp; Date (for Changes to Schedule)</b>	<b>Partner Initials &amp; Date (for Changes to Schedule)</b>
01.	On or about June/July 2021.		
02.	On or about March/April 2022.		
03.	On or about March/April 2023.		
04.	On or about March/April 2024.		
05.	On or about March/April 2025.		
06.	On or about March/April 2026.		

The initial dates populated above are the best approximation at the time the Agreement was created. Any dates above that exceed the term of the Agreement are invalid as such dates automatically expire upon the expiration of the Agreement.

*[Instructions for Change to Appendix: Management Points of Contact or Technical Points of Contact for the respective Parties, as appropriate, are to strikethrough matrix items intended for change and insert new information. Thereafter, each item changed will be initialed and dated accordingly.]*